

List of Pending Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Previously Presented) A method for introducing an intact oligonucleotide into a mammal,

the method comprising the step of orally administering to the mammal a chimeric oligonucleotide, the oligonucleotide comprising about 6 to 50 nucleotides linked via at least one phosphorothioate internucleotide linkage and at least one internucleotide linkage selected from the group consisting of alkylphosphonate, phosphorodithioate, alkylphosphonothioate, phosphoramidate, phosphoramidite, phosphate ester, carbamate, carbonate, phosphate triester, acetamidate, and carboxymethyl ester, the oligonucleotide further comprising at least one 2'-O-alkyl ribonucleotide,

whereby the oligonucleotide is present in intact form in plasma at least six hours following oral administration.

2. (Original) The method of claim 1, wherein the oligonucleotide comprises at least one alkylphosphonate internucleotide linkage.

3. (Previously Presented) The method of claim 2, wherein the oligonucleotide comprises at least one alkylphosphonate internucleotide linkage at its 3' terminal end, at its 5' terminal end, or at its 3' and 5' terminal ends.

4. (Original) The method of claim 3, wherein the oligonucleotide comprises at least two alkylphosphonate internucleotide linkages at its 3' and 5' terminal ends.
5. (Original) The method of claim 2, wherein the oligonucleotide comprises at least one methylphosphonate internucleotide linkage.
6. (Previously Presented) The method of claim 4, wherein the alkylphosphonate internucleotide linkage is a methylphosphonate internucleotide linkage.
7. (Previously Presented) The method of claim 1, wherein the oligonucleotide comprises from about 15 to 25 nucleotides.
8. (Original) The method of claim 1, wherein the oligonucleotide is complementary to a gene of a virus, pathogenic organism, or a cellular gene.
9. (Previously Presented) The method of claim 1, wherein the oligonucleotide is complementary to a gene of a virus involved in a disease selected from the group consisting of AIDS, oral and genital herpes, papilloma warts, influenza, foot and mouth disease, yellow fever, chicken pox, shingles, adult T-cell leukemia, Burkitt's lymphoma, nasopharyngeal carcinoma, and hepatitis.
10. (Previously Presented) The method of claim 1, wherein the oligonucleotide is complementary to a gene encoding a protein associated with Alzheimer's disease.

11. (Previously Presented) The method of claim 1, wherein the oligonucleotide is complementary to a gene encoding a protein in a parasite causing a parasitic disease selected from the group consisting of amebiasis, Chagas' disease, toxoplasmosis, pneumocytosis, giardiasis, cryptosporidiosis, trichomoniasis, malaria, ascariasis, filariasis, trichinosis, schistosomiasis infections.
12. (Cancelled)
13. (Cancelled)
14. (Cancelled)
15. (Previously Presented) The method of claim 1, wherein the 2'-O-alkyl ribonucleotide is a 2'-O-methyl ribonucleotide.
16. (Previously Presented) The method of claim 1, wherein the oligonucleotide comprises at least one 2'-O-alkyl ribonucleotide at its 3' terminal end.
17. (Previously Presented) The method of claim 1, wherein the oligonucleotide comprises at least one 2'-O-alkyl ribonucleotide at its 5' terminal end.
18. (Previously Presented) The method of claim 1, wherein the oligonucleotide comprises at least one 2'-O-alkyl ribonucleotide at its 3' and 5' terminal ends.
19. (Previously Presented) The method of claim 18, wherein the oligonucleotide comprises at least two 2'-O-alkyl ribonucleotides at its 3' and 5' terminal ends.
20. (Previously Presented) The method of claim 15, 16, 17, or 18, wherein the 2'-O-alkyl ribonucleotide is a 2'-O-methyl ribonucleotide.

21. (Previously Presented) The method of claim 15, 16, 17, or 18, wherein the 2'-O-alkyl ribonucleotide is further substituted.

22. (Previously Presented) The method of claim 21, wherein the 2'-O-alkyl ribonucleotide is further substituted with a substituent selected from the group consisting of halo, hydroxyl, trifluoromethyl, cyano, nitro, acyl, acyloxy, alkoxy, carboxyl, carbalkoxyl and amino groups.

23. (Previously Presented) A method for introducing an intact oligonucleotide into a mammal, the method comprising the step of orally administering to the mammal a chimeric oligonucleotide,

wherein the oligonucleotide comprises 15 to 25 nucleotides linked via at least one phosphorothioate internucleotide linkage,

wherein the oligonucleotide further comprises at least two alkylphosphonate internucleotide linkages at its 3' and 5' terminal ends,

wherein the oligonucleotide further comprises at least two 2'-O-alkyl ribonucleotides at its 3' and 5' terminal ends,

and wherein the oligonucleotide is present in intact form in plasma at least six hours following oral administration.

24. (Previously Presented) The method of claim 23, wherein the alkylphosphonate internucleotide linkages flank a section of the oligonucleotide comprising at least two phosphorothioate internucleotide linkages.

25. (Previously Presented) The method of claim 23 or 24, wherein the two 2'-O-alkyl ribonucleotides are 2'-O-methyl ribonucleotides.

26. (Previously Presented) The method of claim 23 or 24, wherein the 2'-O-alkyl ribonucleotides are further substituted.

27. (Previously Presented) The method of claim 26, wherein the 2'-O-alkyl ribonucleotide is further substituted with a substituent selected from the group consisting of halo, hydroxyl, trifluoromethyl, cyano, nitro, acyl, acyloxy, alkoxy, carboxyl, carbalkoxyl and amino groups.